

Flexible Thinking Value-Add: Embedding Strategic Design into Graduate Education

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ABSTRACT

This research study investigates the potential of strategic design as an approach to addressing complex challenges. The study focuses on two courses, "Leadership for Policy Professionals" and "Strategic Design for Systemic Change," offered at the UBC School of Public Policy and Global Affairs. The aim is to understand the impact of strategic design principles on students' learning experiences and their ability to tackle systemic issues. Using Grounded Theory methodology, data was collected through surveys and interviews from course participants. The qualitative data analysis process involved constant comparison and theory development. The study aimed to construct theories that emerged from the data, ensuring a grounded and inductive approach. Findings reveal that teaching strategic design to students can enhance their problem-solving abilities and provide a new framework for tackling complex issues. However, challenges arise from the multidisciplinary student teams and their familiarity with well-defined problems. Overall, this research highlights the potential value of strategic design to graduate education. It provides insights into designing effective learning experiences that foster strategic thinking, problem-solving skills, and a deeper understanding of systemic issues. Further research is needed to optimize the integration of these principles and to explore its application in other academic and professional contexts.

Keywords: curriculum design, graduate education, leadership, public policy, strategic design, systems thinking.

INTRODUCTION

This research project is intended to test the potential for strategic design to improve leadership for systemic change. To state the woefully obvious, our world needs effective interventions for a growing roster of social, environmental, economic, and other conundrums that are highly complex, interrelated, resistant to consensus, and threatening to local, national, and global stability and sustainability (Quayle & Phelps, 2019). These challenges need to be addressed at a systems level, not incrementally tinkering around the edges. Therefore, we seek new approaches that use flexible, systems thinking and add in some new strategic tools and techniques.

The UBC School of Public Policy and Global Affairs hosts a two-year professional Master's degree program. The program began in 2015 and a rigorous curriculum review was implemented in 2019-2020. As a result of this review, several new 1.5 credit courses were introduced to provide professional development as an integral and important part of the program addressing learning outcomes requested by students and employers. One of the new

courses or studios as we prefer to call them is Leadership for Policy Professionals in which concepts of designed leadership and strategic design are introduced.

Designed leadership and strategic design are both grounded in the mindsets, tools, and thinking processes of designers. Strategic design is “an approach that involves strategic thinking and reflective action through the use of creative and critical thinking techniques, resulting in situated innovation (Angèle Beausoleil, 2016). The strategic design research methodology is a mixture of incremental inquiry, cultural, and participant observation in various environments. The strategic design practice seeks common themes in diverse sectoral and cultural settings, which includes students, business, and community leaders.

This study focused on student learning and experiences in Leadership for Policy Professionals (Leadership Studio) and Strategic Design for Systemic Change (Strategic Design Studio). The former takes a more internal perspective focusing on personal leadership, while the latter has a more external focus on the types of projects requiring systemic change. This research will also help shape the processes and practices used in the Master of Public Policy and Global Affairs and Strategic Design where it is particularly applicable in the Global Policy Project (the capstone project required for graduation by the School of Public Policy and Global Affairs).

1. STRATEGIC DESIGN LEADERSHIP APPROACH IN GRADUATE EDUCATION

Strategic design is not the same as design thinking. The two models are different because strategic design operates at a meta-level often using some of the tools and techniques of design thinking. “Design is active, it is a verb, design is not just about thinking but about constantly trying and doing.” (Quayle, 2017). A comprehensive description of strategic design and its distinction from other forms of design was developed by the Helsinki Design Lab.

...Traditional definitions of design often focus on creating discrete solutions—be it a product, a building, or a service. Strategic design applies some of the principles of traditional design to “big picture” systemic challenges like health care, education, and climate change. It redefines how problems are approached, identifies opportunities for action, and helps deliver more complete and resilient solutions. Strategic design is about crafting decision-making. (Helsinki Design Lab, 2014).

This can be seen in the model of ASK-TRY-DO which is about exploring, discovering, prototyping, evaluating, and implementing. Various thinking strategies like strategic design and design thinking have been quite popular in recent times, gradually crossing over from design into mainstream business (Schachter, 2011) through firms like IBM (Internet Business News, 2017), SAP (Kupetz, 2019) and organizations like IDEO (Camacho, 2016). However, any foray into graduate studies is still limited but growing through programs like Stanford’s d.school, and in business schools (Mootee, 2013) such as the Business Design Program at the Rotman School of Management at the University of Toronto. Some of the other fields which have embraced strategic design include design programs (Royalty et al., 2012), library education (Clarke et al., 2020), and medical education (Deitte & Omary, 2019). In evaluating leadership approaches in graduate education, there is a gap in exposing graduate students to more encompassing and flexible models that can be applied to solve systemic challenges while improving leadership competency. This research provides a bridge to the identified gap.

2. THE STRATEGIC DESIGN PROCESS BRIEFLY EXPLAINED

Strategic design is defined as applied wandering, within a framework of milestones and decision points, to arrive at a solution to challenging issues. This flexible model of thinking is a problem solving, opportunity seeking, decision making process that is grounded in participatory stakeholder research (Quayle, 2017). The approach can be broken down into three stages – ASK – TRY – DO

ASK: The ASK process of strategic design entails researching, discovering the problem, and scoping the problem and opportunity. It also involves understanding who the problem affects and why it happens.

TRY: In the TRY process, ideas are generated, tested, chosen and prototyped. There is an important bridge between ASK and TRY: a bridge from “what is to what could be”—from current state to future state. The bridge often entails revisions of the criteria for successful solutions and a revisiting of the problem definition.

DO: The DO process includes the implementation and evaluation stage, and the potential to repeat the cycle.

Note the importance of REFLECTION as a critical part of strategic design – a space to stop, take a breath and ask more questions.

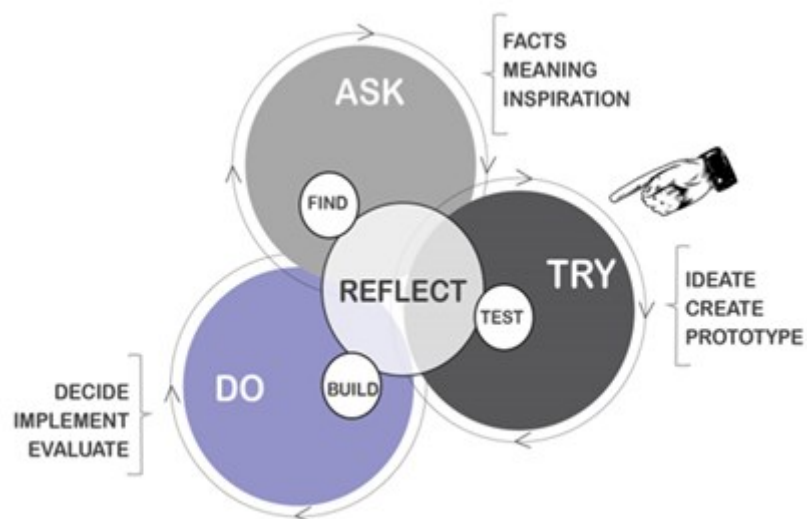


Figure 1. A breakdown of the Strategic Design Process using the ASK-TRY-DO Methodology (Angele Beausoleil & Quayle, 2012)

3. RESEARCH METHODOLOGY

This study applied Grounded Theory, pioneered by Glaser and Strauss, which allowed the researchers an inductive, comparative methodology that provides systematic guidelines for gathering, synthesizing, analysing, and conceptualizing qualitative data for the purpose of theory construction (Charmaz, 2001). Research data were collected through different qualitative techniques such as interviews and surveys without anticipating what direction the research would align. This approach enabled the research team to avoid preconceptions about the research and the data while applying Grounded Theory to the field of strategic design.

The two studios used in this study, Leadership for Policy Professionals (Leadership) and Strategic Design for Systemic Change (Strategic Design), are both 1.5 credits or approximately 20 hours of formal learning time per studio. The main learning outcome for Leadership Studio is the development and application of leadership skills to an ever-changing world while

understanding one's values. The main learning outcome in Strategic Design Studio is the successful application of strategic design principles to systemic issues across multiple sectors. This application includes the articulation, generation, and implementation of solutions.

Although the two studios are different, they approach tackling systemic issues using strategic design principles from two perspectives: the sense of self-development– the internal perspective, which is the Leadership Studio and the sense of policy development – the external perspective, which is the Strategic Design Studio. Both included a studio component that enhances the practical implementation of the theoretical outcomes, allowing the students to explore either the internal or external perspective independently or in groups. Both studios were conducted in the same academic year, with the Leadership Studio being a two-term studio (ran over 8 months) while the Strategic Design Studio was held over four weeks as an intensive. The learning materials included case studies, readings, discussions, group work and the use of Miro, an online creative and collaboration tool. This research applied a qualitative approach including content analysis by following the students' experiences through the studios, analysing their responses and their understanding of course contents through surveys, quality of deliverables, and interviews.

3.1. Survey and interview process

Survey: At the start of the academic year, students were surveyed to understand their backgrounds and if they had been exposed to any strategic design principles – in essence the participants could be classed as non-designers – with little or no experience with design processes. Some of the background data collected included academic, professional, and cultural heritage (See Appendix for survey questions used for both studios). The students completed the survey within the first week of the studio which was planned to enable the research team to measure the real impact of the studio at the end of the semester. The survey was conducted via Qualtrics, an online survey tool that allowed the students to participate globally, especially during the pandemic. Some of the questions were specific but with numerous formats, including open and closed-ended questions. Some examples of the open-ended questions were “What do you hope to take away from this studio?” “What do you think strategic thinking is?” and “What are your responsibilities in your most recent role?” The questions were structured in this way to prevent the bias of assuming job titles, the functions performed and to determine if students might have indirectly applied strategic design principles without realizing it. The application of open-ended questions allowed the researchers to apply grounded theory to the initial data collection by allowing for participants to provide rich detailed responses on their experiences and perspectives. Academic backgrounds were also collected to understand how students viewed systemic issues and how they understood systems thinking. In addition, the studios are graduate school studios that enlisted students from all backgrounds including business administration, public policy, urban planning, health leadership, pharmaceutical sciences, and interdisciplinary studies.

Interviews: In both studios, exit interviews were conducted with the students to gauge their experiences, takeaways, and, most notably, their understanding of strategic design. Five open-ended questions were asked during the interviews related to strategic design, systemic change, and leadership. The open-ended interview questions allowed for constant comparison across studios participants, test of theory development and saturation components of grounded theory which allowed the researchers to uncover new insights. See Appendix for interview questions.

Due to the diverse background of the students, including different professional experiences, two open-ended questions were posed to the students to understand their depth of knowledge. The professions of the students included engineering, healthcare leadership, research, community relations, public sector, planners and developers.

The questions posed are as follows: “In what industry or sector is your work experience?” and “Describe your most recent work experience?”, these questions complement each other because the diversity of the sectors shapes how the students will experience and apply the strategic design framework. By having the students describe their most recent work experiences, it enabled the instructor and researcher to understand if the students have inadvertently applied any concepts of strategic thinking. In addition, it demonstrated potential opportunities in their past where the framework could have been applied. A follow up question was posed “Do you have prior experiences with strategic design before this studio?”, 33.3% said yes, 44.4% said no and 22.22 said maybe. This showed a broad disparity in understanding and self-declaration of knowledge.

The students were asked what sector they believe is in urgent need of strategic design, and this question complemented how they understand the value of strategic design (which was tested using questions such as “what do you think strategic design is?” and “what role can it play in systemic change?”). The students listed the following sectors or topics: retail, climate resilience, healthcare, energy sector, agriculture, natural resources, public sector, pandemic management (COVID-19), urban planning, long term care, policing, education, and renewable energy housing.

Through analysis of the sector/topics, it was inferred they all have systemic challenges, and this indicates that strategic design can be “sector agnostic” if positioned not as a silver bullet to solutions but as a possible approach. This flexible approach allows for a wide range of applicability of the framework from the perspective of the students in a variety of disciplines.

The Strategic Design Studio involved a more external perspective on problem solving and that led to the students being asked about their leadership style. This was analysed to understand the alignment with learning outcomes and studio content. Table 1 shows a breakdown of the students’ leadership style regarding systemic change.

Table 1: Breakdown of the students’ leadership style regarding systemic change

Students listed three words that described their leadership style		
shift	change	transition
process	creativity	challenging the status quo
complexity	long term	change
long term	holistic	impactful
co-creating	engaged	new
intentional	process	decision-making
critical thinking	process improvement	systemic change
methodical application of a design process towards a specific end	a wholistic design strategy which focuses on a specific outcome	design with the end, and the process, in mind.
complex	systems	transformative change
reflection	iteration	co-creation

4.2. Survey results (leadership studio)

Data collection was similar to the Strategic Design Studio. The Leadership Studio survey, which included similar questions, was sent to the 12 participants in the studio, and 8 of them

completed the survey. Key areas identified were demographics, experiences, and educational background. The population was from a diverse geographic and academic backgrounds. The respondents described Asia, North America or South America as home. 50% were North Americans, while 37.5% were Asians and 12.5% were South Americans (See Chart 1 below). From a gender perspective, 37.5% identified as male and 62.5% as female. From an academic perspective, 87.5% of the students were master's students, and 12.5% were in undergrad. There was a variation in the educational background with three students with specializations in business administration, two students from public policy, and one from community and regional planning.

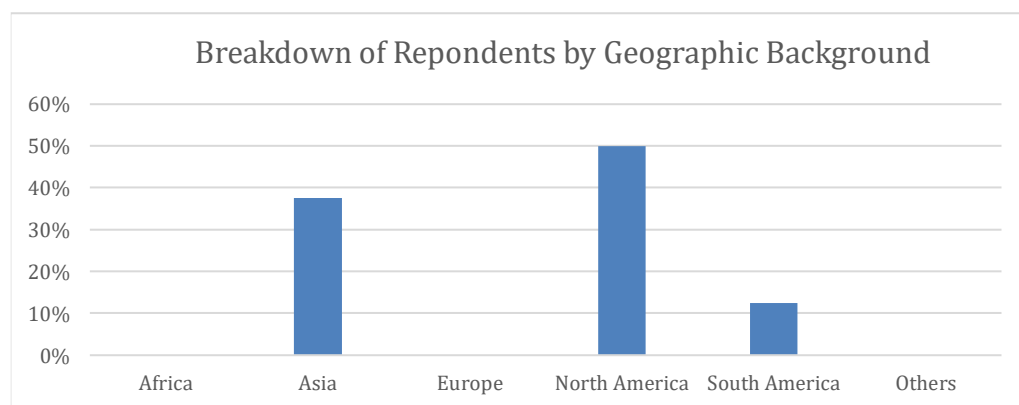


Figure 3. Chart showing a breakdown of Leadership Studio survey respondents by geographic background.

To understand students' motivation for taking the studio, they were asked, "why are you taking the studio?" and "what are you hoping to learn?" Their answers were compared to the studio learning outcomes to ensure that the studio design met their learning outcomes and expectations. Analysis of learning expectations completely matched the learning outcome, just like in the Strategic Design Studio. However, the goal of the Leadership Studio can be summarized as improving leadership skills. This finding was fascinating because of the varied duration of both studios and different populations. The Strategic Design Studio was held in a four-week intensive – four Saturdays), while the Leadership Studio was held over two terms (7 sessions spread over 26 weeks). The similarity was the use of strategic design as the guiding principle and the same teaching crew, which consisted of a professor, a teaching assistant, and a research assistant.

In the interview section of this study, which occurred after the studio completion, their experiences on the outcomes were also compared to their initial expectation of the studio and strategic design. Using a word cloud (see figure 3 below) to analyse the responses, the keywords that stood out are leadership, improve, learn, positive change, better, and professional.

Students were asked to describe their leadership style in five words				
change	shape	become	enhancement	comprehend
service	empathetic	amiable	team oriented	organized
example	mentoring	micromanagement	reinforcement	incentivization
reliable	diligent	quick thinker	open to talk	taking feeling into consideration
trust	engaging	recognition	compassionate	lead with example
adaptable	harmonious	mindful	reflective	progressive
supportive	empathetic	consensus	practical	goal- oriented

Respondents were also asked what aspect of their leadership skills they would like to improve. In line with the principles of strategic design, ASK-TRY- DO in a continuous improvement technique would be applied to help the respondents improve on their weakness while growing their strengths. Below is a table showing the leadership areas of improvements from the perspective of the respondents.

Table 3: Breakdown of leadership style of the participants (curated from the question, describe your leadership style in five words)

Students were asked to describe three areas of leadership they would like to improve		
shift	change	transition
motivating and inspiring others to achieve mutual goals	gaining support for project or policy	translating specialized data and knowledge for non-specialist audience
communicate	trust	work together
self confidence	assertiveness	public speaking
trust	self awareness	approachable
communication	relationship skill	adaptability
visionary	motivation.	creative solution. generating solutions facing problem
people management	communication	innovation
solution building	ideation	effectiveness

4.3. Interview results

Interviews were held with the students who completed the studios. The interviews consisted of five questions (see appendix). Across both studios the interviews lasted an average of 15 minutes. The purpose of the interviews was to understand students' perspective of strategic design and its application to topics such as leaderships and systemic change. In return, learners' inputs enabled us as researchers and instructors to understand how the strategic design method could be improved.

4.4. Strategic Design studio interviews

ASK was the favoured part of the model: During interviews, the first question was "What is your favourite part of the ASK – TRY – DO model? And why?". 50% of the participants indicated that the ASK part of the model was their favourite, while 25% chose TRY, and the remaining 25% chose the DO process. Some of the reasons given were that the TRY/DO stages allow for different experimentations and envisaging of solutions to tackle some systemic problems. At the same time, the group that chose the ASK step of the model mentioned that it enabled them to drill down to the root cause of the challenge, especially for a systemic issue perceived as insurmountable. Within the ASK- TRY- DO model, the participants were asked to pick their favourite technique and why. They choose the Assumption Dumption and Empathy Map

(Angele Beausoleil & Quayle, 2012) . These tools assist by seeking to understand what the stakeholder is thinking, seeing, feeling, and generally sensing.

Preferred techniques fall in ASK: The techniques which they all preferred fall within the ASK stage of the model. A question posed was “what tools from the studio have informed your perspective on solving systemic issues?” The tool that appeared multiple times was integrative thinking pioneered by Jennifer Riel and Roger Martin, which involves combining opposing ideas to build new ideas and solutions (Riel & Martin, 2017). The interviewees mentioned this tool as a major driver in exploring new possibilities and ideating solutions to systemic issues.

Time as a constraint: Stakeholder connections: With a clear understanding that students are driven towards a solution, they were further asked, “what is your biggest takeaway from learning about strategic design and why?”. They reflected on the relationship between solving systemic issues and strategic design from a personal perspective. The interviewees responded that time as a constraint defines the solution and the importance of bridging gaps by connecting with stakeholders.

Make strategic design relatable to everyday life: These perspectives articulate some of the fundamental principles of strategic design, and the ASK TRY DO technique which includes breaking down assumptions and barriers while continuing to iterate. In conclusion, the interviewees were asked, “how can strategic design approach be improved?” Students mentioned connecting the competencies of strategic design to the skills of the workplace and making the concept relatable to day-to-day life. Another perspective that arose was encouraging students to deal with the ambiguity that comes with systemic problems and models such as strategic design.

4.5. Leadership studio interviews

ASK is the favoured part of model: Similar to the Strategic Design Studio interview, the first question asked during the interviews was “What is your favourite part of the ASK – TRY – DO model? And why?”. 60% of the participants indicated that the ASK part of the model, while 40% of the participants indicated that TRY was their favourite part. Students suggested that ASK enabled them to understand and define the problem by asking the right questions. For the 40% who described the TRY aspect of the model as their favourite, they explained that the TRY process enabled them to be more agile and experimental, especially in leadership situation with uncertainties.

ASSUMPTION DUMPTION and FIVE WHYS favoured techniques: The follow up question was “What is your favourite technique and why?” Techniques listed included Assumption Dumption which is a technique in the ASK process that can be used to make unstated beliefs explicit, develop shared understanding across diverse groups, and identify opportunities for further research. Assumptions are stated and then reversed to see if new opportunities are uncovered which provide a new lens on certain beliefs (Quayle, 2017).

Participants also identified the 5 WHYS as a favourite technique: The 5 Whys' is an easy problem-finding technique which aims to uncover the root cause of a situation by repeatedly probing deeper into a statement by asking “Why?”. (Angele Beausoleil & Quayle, 2012).

The techniques listed by the interviewees are all in the ASK section of the ASK-TRY-DO model and included using Five Whys to explore boundaries, the 10 principles of Designed Leadership,

Assumption Dumping and En'owkin (a technique from the Okanagan people that fosters deep voluntary collaboration) (Armstrong, 2009).

Asking powerful questions critical: The third question asked during the interview was “how have you learned to apply strategic design to leadership?” This question tests the linkage between strategic design learning and the learning outcomes from the survey. Participants responded with applications like thinking before acting, posing the right questions, drilling down and hearing from different communities before making a decision, and empathy.

Flexible Approaches: The fourth question posed was “what is your biggest takeaway from learning about strategic design and why?” This question encouraged the interviewees to reflect on their broad experiences. The application of Personal Construct Theory helps explain how some of the interviewees perceived the model and learning experiences, due to their prior experiences (Kelly, 1991). In combination with personal constructivism this showed how the knowledge was constructed to produce negotiated understanding (Berger & Luckmann, 1966). Some of the interviewees described the model as vague but mentioned that it was intentionally vague. Others stated that when strategic design involved drawing a picture to make things more concrete that this assisted in creative thinking which did put abstract challenging problems into reality.

Need more case studies and real examples: Students described the model as having a well-defined process that enables adaptability whilst staying nimble in leadership situations. The interview concluded with the question “how can the strategic design approach be improved?” Students suggested that situational circumstances such as in-person relations would be helpful to show how global uncertainty such as the pandemic will affect the model and that more case studies which includes sector related applications would also help. Other participants mentioned that they would love to see and understand scenarios in which the DO – component failed.

5. REFLECTION AND CONCLUSION

This study followed the Grounded Theory methodology, where data was collected without anticipating what direction it would take. The researchers utilized open-ended questions in interviews and a survey, using a constant comparison method to look for similarities and differences in the data while ensuring that the research project reached a point of theoretical saturation. The researchers anticipated that teaching graduate students strategic design through the two streams of designed leadership and systemic change would present a new framework for thinking and solving challenging problems.

Strategic design as a field provides the utility for multidisciplinary teams to learn how to tackle, challenge, and propose solutions to the problem. Throughout the study, the teams were multidisciplinary based on their professional background, academic specialization, and lived experiences as non-designers. Although this was a great collaboration opportunity, this situation brought its challenges, which resulted in some students not fully grasping the full extent of the model and its applicability and making it challenging to benchmark a base level of understanding for the students.

Also, strategic design is a practical hands-on model that requires openness, boldness, and a lack of restriction. There was an adjustment period for the students due to how open-ended the deliverables and problems were presented. Students were, unfortunately, because of

previous education, more familiar with engaging well-defined problems and one-path solutions. It was notable, especially in the Strategic Design Studio (which was only 4 weeks long – an “intensive”) that they expressed resistance to embrace “ambiguity” and not knowing what was next. The teams that “pressed through” this period (and most of them did) somewhat surprisingly delivered assignments of top quality and with limited guidance. This breakthrough is a breakaway from “modern educational institutions that often reward complacency and compliance rather than fostering an eagerness to ask questions and to test and understand the edges of risk” (Quayle, 2017).

From the interviews, doing a comparative analysis of the survey results, the studio outlines matched the expected student learning outcomes, which in turn showed that they understood concepts of strategic design and were able to apply them in unique situations. This research through the application of grounded theory guided the researchers to prove to be a plausible theory, based on the patterns and relationships identified from the data set that exposure to strategic design provides a flexible model for solving systemic challenges.

A recent case study about how to improve the interaction of non-designers and design experts through design facilitation (Barros, 2023) provides another window into our insights. Similar to the Barros study, we can conclude that the students in both studios gained a new understanding of design and how it might be expanded to apply to various types of problem solving and opportunity seeking. It becomes a new part of their thinking tool-kit and their approach to not only professional problems but also their lives in general. They will continue to struggle, as we all do, with the sometimes “disconnection” between their own thinking processes and how they intersect with the design process they are learning about.

Strategic design is not a panacea to solving all problems, but the tool kits and concepts are part of the solutions that today's wicked problems (Crowley & Head, 2017) require. And ideally, these studio experiences urge them into a continuous learning mode well into their futures.

However, the following questions remain:

- How does one best design an appropriate learning environment and experience for graduate students who are non-designers with unique professional, cultural, and socio-economic backgrounds an unorthodox model in unprecedented times?
- How would they comprehend the model, construct the knowledge, and find useful applications as part of their continuous learning?
- Most importantly, are they able to apply strategic design (using their own thinking language) and relate it to the world around them?

Further research is needed, but from our takeaways, we found that the quality of learning, the pressure to ASK, TRY and DO (not just “carry on”) was met with more than reasonable deliverables and absolutely an expansion of thought processes that can be motivated through learning by doing in the strategic design model as it becomes embedded into graduate education.

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APPENDIX

SURVEY QUESTIONS: STRATEGIC DESIGN STUDIO

1. What region of the world do you identify as home?

- Asia
- Europe
- North America
- South America
- Others

2. What is your gender?

- Male
 - Female
 - Others
3. What is the highest level of education attained?
 - Masters
 - PhD
 - Others
 4. What is the specialization of your Masters or PhD?
 5. What is your primary faculty?
 6. What is your program?
 7. Why are you taking this studio –591L?
 8. Please describe your most recent work experience.
 9. What industry or sector is your experience in?
 10. What do you hope to learn from this studio?
 11. Using three words what does the phrase “Strategic design” mean to you?
 12. Have you practiced strategic design?
 13. Despite not being familiar with strategic design, from your experience in Saturday’s studio, try to list three aspects of systemic change that you believe strategic design could be applied to.
 14. What sectors do you believe is in urgent need of strategic design?
 15. Please explain how strategic design can play a role in systemic change

SURVEY QUESTIONS: LEADERSHIP STUDIO

1. What region of the world do you identify as home?
 - Asia
 - Europe
 - North America
 - South America
 - Others
2. What is your gender?
 - Male
 - Female
 - Others
3. What is the highest level of education attained?

- Masters
 - PhD
 - Others
4. What is the specialization of your Masters or PhD?
 5. What is your primary faculty?
 6. What is your program?
 7. Why are you taking this studio –511?
 8. Please describe your most recent work experience.
 9. What industry or sector is your experience in?
 10. What do you hope to learn from this studio?
 11. Using five words how would you describe your leadership style?
 12. List and describe three skills you would like to improve on as a leader?
 13. Please explain how strategic design influence leadership.

STRATEGIC DESIGN STUDIO INTERVIEW QUESTIONS

1. What is your favourite part of the ASK – TRY – DO model? And why?
2. What is your favourite technique right and why?
3. What tools from the studio have informed your perspective on solving systemic issues?
4. What is your biggest takeaway from learning about strategic design and why?
5. How can strategic design approach be improved?

LEADERSHIP STUDIO INTERVIEW QUESTIONS:

1. 1.What is your favourite part of the ASK – TRY – DO model? And why?
2. What is your favourite technique right and why?
3. How have you learned to apply strategic design to leadership challenges?
4. What is your biggest takeaway from learning about strategic design and why?
5. How can strategic design approach be improved?